A STUDY TO ASSESS THE EFFECTIVENESS OF GUIDED IMAGERY TECHNIQUE IN REDUCING LOW BACK PAIN PERCEPTION AND LOW BACK PAIN DISABILITY AMONG THIRD TRIMESTER ANTENATAL MOTHERS

A DISSERTATION SUBMITTED TO THE TAMIL NADU DR. M.G.R.MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

OCTOBER, 2016.

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APPROVED BY THE DISSERTATION COMMITTEE ON: JULY 2016

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BONAFIDE CERTIFICATE

I hereby declare that the present dissertation titled **"A Study To Assess The Effectiveness Of Guided Imagery Technique In Reducing Low Back Pain Perception And Low Back Pain Disability Among Third Trimester Antenatal Mothers",** is a bonafide research work done by **Mrs. S. Sugasini., M.Sc Nursing II year** under the guidance of **Mrs. M. Anbarasi, M.Sc.N, HOD of Obstetrics and Gynecological Nursing,** partial fulfillment for the Degree of Master of Science in Nursing, under The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

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CERTIFICATE BY THE GUIDE

This is to certify that the dissertation entitled **"A study to assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers."** is a bonafide research work done by **Mrs. S. Sugasini., M.sc Nursing II year** Nehru Nursing College, Vallioor, in the partial fulfillment for the degree of Master of Science in Nursing under the Tamilnadu Dr.M.G.R.Medical University, Chennai.

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DECLARATION

I hereby declare that the present dissertation titled **"A study to assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers ."**is the outcome of the original research work undertaken and carried out by me, under the guidance of **Mrs. M. Anbarasi, M.Sc.,N, HOD of Obstetrics and Gynecological Nursing,** Nehru Nursing College, Vallioor. I also declare that the material of this has not formed in any way, the basis for the award of any degree or diploma in this university or any other universities.

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"Humble Yourself In The Sight Of the Lord, and He will lift You Up"

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ABSTRACT

A Study to assess the effectiveness Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers.

Objectives of the study

1. To assess the level of low back pain perception and low back pain disability before and after intervention among third trimester antenatal mothers.

2. To assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers.

3. To correlate the level of low back pain perception and selected low back pain disability among third trimester antenatal mothers.

4. To determine the association between pretest level of low back pain perception and low back pain disability with selected demographic and clinical variables of third trimester antenatal mothers.

Hypotheses

H1: There is significant reduction in low back pain perception after Guided Imagery Technique among third trimester antenatal mothers.

H2 : There is significant reduction in low back pain disability after Guided Imagery Technique among third trimester antenatal mothers.

H3: There is a significant association between level of low pain perception and low back pain disability and selected demographic and clinical variables of third trimester antenatal mothers.

Review was done on prevalence of low back pain among antenatal mothers and effectiveness of Guided Imagery Technique in reducing low back pain. The Conceptual Framework for this study was based on Modified J.W. Kenny's Open System Model. Research design for this study was quasi experimental one group pre test post test time series design and purposive sampling technique was used and the sample size was 30. The researcher provided Guided Imagery technique to selected samples. The samples were made to utilize the intervention for 15 minutes for 7 days. Post test was conducted on 3^{rd} ,5^{th} and ,7^{th} day of intervention. Numerical pain rating scale and modified Oswestery low back pain disability questionnaire was used to assess the low back pain perception and low back pain disability before and after intervention.

Main findings of the study

The results shows that during post test 3 on the 7^{th} day, the mean level of low back pain perception score was 3.56 lower than the pre test mean level low back pain perception score of 6.56 among third trimester antenatal mothers. The obtained 't' value 20.85 was highly significant at 0.05 level ($p< 0.05$) .During post test 3 on the 7^{th} day, the post test mean level of low back pain disability score was 9.50 lower than the pre test mean level low back pain disability score of 17.60 among third trimester antenatal mothers. The obtained 't' value 15.92 was highly significant at 0.05 level ($p< 0.05$) . Hence the stated H1 hypothesis was accepted. During post test3 on the 7^{th} day co relation between the low back pain perception and low back pain disability was 0.72,which was high degree positive correlation. There was significant association between educational status and low back pain perception ($\chi 2 = 11.2$ $P < 0.5$) and low back pain disability ($\chi 2 = 6.1$ $P < 0.5$) , and there was no

association between age, residential area ,occupation ,dietary pattern and income with low back pain perception and low back pain disability .

Conclusion

The main conclusion drawn from this present study was that most of the third trimester antenatal mothers had severe low back pain perception and severe low back pain disability . The proper Guided Imagery technique was effective in reducing the low back pain perception and low back pain disability.(personal care, walking, sitting, standing, sleeping, social life, employment, lifting)

Based on the findings of the study recommended for future study are as follows

- The study can be replicated with large sample size
- The same study can be done with control group.
- The same study can be conducted as longitudinal study

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CHAPTER-I

INTRODUCTION

" The movement the child is born, the mother is also born. She never existed before "

- Osho

Pregnancy is not a disease but it is true to say that a pregnant woman does not feel as normal as when not pregnant. There are some pregnancy related complaints which, when excessive need to be treated. Most of the common minor ailments during pregnancy can be treated. Each week of pregnancy brings with it new changes and feelings that may require some explanation and support. The anatomical physiological and biochemical adaptations to pregnancy are profound. These changes during pregnancy begin soon after fertilization and continue through gestation. These changes occur in response to physiological stimuli provided by the fetus and placenta (Dr. Nirubama singh).

Pregnancy is a time of enormous change in a women's body and mind. These changes affect her physical well being, self esteem, interactions with others, daily activities and future plans. All changes in a mother's body during pregnancy are due to the effects of specific hormones (Dr.s.vijayalaksmi).

Pregnancy period has three trimester each of which is marked by specific fetal development. A full term pregnancy is considered at 40 weeks. During the third trimester final stretch of pregnancy is reached so are probably very excited and anxious for the birth of baby . Some of physical symptoms may experience during this period includes shortness of breath, urinary incontinence , heart burn , and low back pain .Low back pain is one of the most common complaints during third trimester. As the fetus grows, a woman's abdominal wall stretches to accommodate

the expanding womb. Abdominal muscles are stretched to the point of their elastic limit by the end of pregnancy.

The centre of gravity shift upwards and forward because of the enlargement of the uterus and breasts. This requires postural compensation for balance and stability. About 50 % pregnant women experience back ache and it is more likely to be reported in very young women .Postural changes, over stretched abdominal muscles, strained back muscles and the effect of Relaxin on the pelvic ligaments may contribute to back ache (myles 2011)

The lumbar region is constituted of unique vertebrae that are designed to withstand increased weight and retain a lordotic curve. The vertebral canal of the lumbar region houses the tail end of the spinal cord and the Cauda Equina. To maintain stability and provide support, the lumbar region is connected and held secure by an intricate web of ligaments: ligamentum longitudinale anterior and superior, ligamentum flava, ligamentum interspinata, ligamentum intertransversarium and the ligamentum supraspinale. . All the mentioned ligaments will provide stability, whereas the longitudinal ligament will also be attached to the intervertebral disc in order to keep the discs in position. Additionally, the lumbar region is supported by strong low back muscles, pelvic muscles and abdominal muscles**.**

Low back pain

There are several possible mechanisms of injury which could be causing pregnancy related Low Back Pain. During pregnancy, changes occur in the focal joints, in the back muscles, and in ligaments. This is mainly caused by the increased release of the hormone Relaxin, which causes ligament laxity, and therefore can affect the stability of the spine and lead to back pain.

Relaxin is a small peptide which probably acts as a growth hormone affecting collagen .It appears to be a potent stimulator of uterine growth in pregnancy and is involved in the softening and effacement of cervix and the onset of labour. With progesterone, relaxin causes relaxation of the ligaments and muscles, reaching its maximum effects in the last few weeks of pregnancy. Relaxation of the symphysis pubis and sacroiliac joints leads to instability of the pelvic girdle and relaxation of the sacrococcygeal joint allows extra backwards movement. Some women develop a rolling gait and as the uterus change the centre of gravity , the women leans backward to compensate, exaggerating the normal lumbar curve which leads to backache .(Myles 2011)

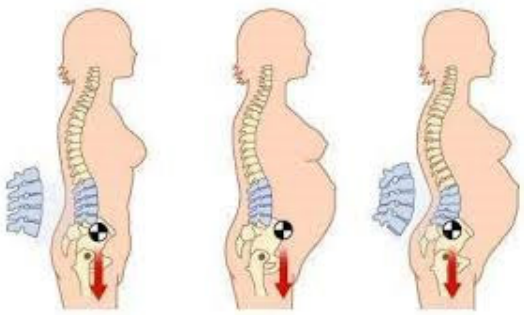

Fig: I- Anatomy of Lumbar Curve

The most common onset of low back pain is during the 5th and 6th month of pregnancy, and the pain is usually worse in the evening. About 67% of women experience pain at night. Factors that aggravate the pain include: standing, sitting, coughing or sneezing, walking, and straining during a bowel movement. However pain and a disability of the lumbopelvic region are usually proven to be experienced as mild to moderate, except for a minor part (20%) of the pregnant women that will describe the pain as severe.

Low Back Pain Disability

Low back pain affects activities of daily living. Pregnancy related low back pain is also reported to reduce health related quality of life. Prevention and treatment of back pain related to pregnancy has considerable implications for the women themselves and for society in terms of quality of life, public health costs and productivity. Low back Pain affects the physical, physiological, emotional, financial and social aspects of personal life. The degree of pain is closely linked to the strain of bending, sitting, standing, lifting, walking and sleeping.

Non Pharmacological Management

The use of non pharmacological management can limit the pain sensation, It includes physiotherapy, stabilization belts, nerve stimulation, acupuncture, massage, relaxation and yoga The non pharmacological therapies aim to treat the affective, cognitive, behavioral and socio cultural dimensions of pain. These therapies can treat the pain as adjuvant or complementary at middle level and severe level pain experiences as an adjuvant or complementary treatment. (Yiidurm 2006).

Non pharmacological methods will helps to

- increase the individual comfort feeling,
- decrease the feeling of weakness,
- improve the activity level and functional capacity,
- reduce stress and anxiety,
- reduce the pain behavior and focused pain level and,
- reduce the needed dosage of analgesics thus decreasing the side effects of the treatment

One of the non pharmacological technique is Guided Imagery relaxation technique.. Guided imagery technique is based on the idea that the mind can influence the functions of the body. Proponents suggest that imagery can have a direct effect on both the endocrine and nervous systems, which leads to changes in the immune system function. Guided imagery is used to promote relaxation, reduce stress and pain and help the mind to influence the body in positive ways. Many studies have shown that relaxation with Guided Imagery can reduce client pain , increase client tolerance and satisfaction with the procedure and reduce pain. (Stevens, 2008).

Guided Imagery Technique

Guided imagery is a mind body technique that has been found to be quite effective for pain management . Through this technique body's natural analgesics (endorphins) are increased through relaxation , which in turn decreases pain. The simplest and cost effective technique is guided imagery as one of the types of non pharmacological management to improve the health and well-being of the mother. Guided Imagery has been called the language of the mind. It is a language that the mind can use to talk to the body, a language the body can understand immediately without question. It has also been described as the interface, or connection between the body and the mind because of the positive chemical and biological changes occurs in the body. These changes are extremely useful in the successful treatment of pain.

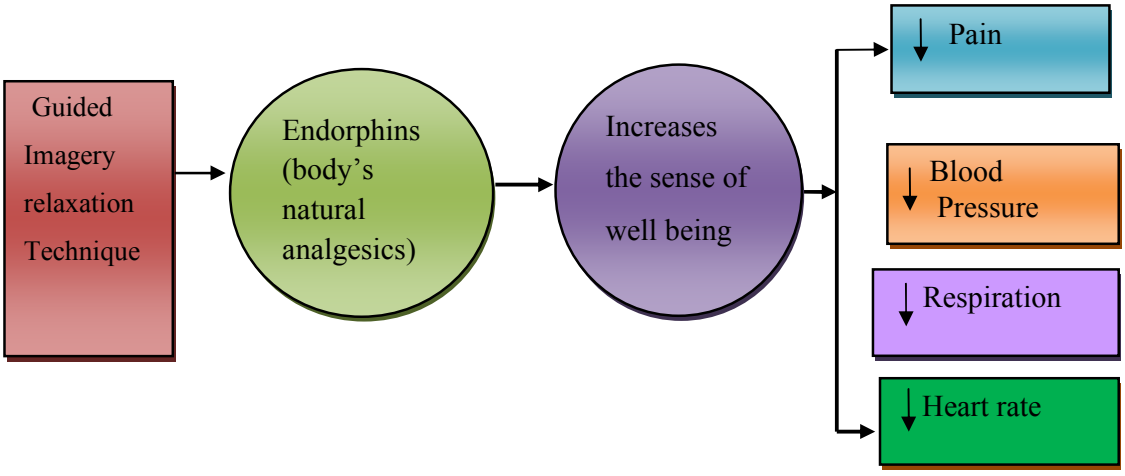

Fig: II; Physiological theory of Guided Imagery Relaxation Technique

Guided Imagery relaxation technique is a major part in behavior-based interventions for anxiety, stress and pain. This technique can reduce tension, blood pressure, heart rate and respiratory rate and increase body temperature. These responses are the result of activating the autonomic parasympathetic nervous system. Guided imagery relaxation technique is a mind–body intervention with the purpose of reducing stress, through diverting the mental focus from a painful stimulus or cause of anxiety to a more pleasant thought and relaxation. It is a technique of binding the power of mind to be at ease and the body to heal. The purpose of guided imagery is to form an emotional connection between mind, body and spirit. (Lambert, 2004).

Guided imagery is a very useful tool for chronic and acute pain. The use of Guided imagery can give a person a sense of peace, tranquility and self-confidence that they are able to be in charge of their illness and pain. Guided imagery is a powerful resource that we all have within us at all time, which is the power of mind.

It provides an opportunity for people to directly focus on positive thoughts and images, thus allowing a much welcomed relief. (Holistic online, 2007).

The term 'Guided Imagery' refers to a wide variety of technique, including simple visualization and direct suggestion using imagery, fantasy exploration, dream interpretation, imagination where elements of the unconsciousness are invited to appear as images that can communicate with the conscious mind.(Bary, 2002).

The severity of low back pain varies from mild self limiting pain to severe disabling condition. Some of them managing with pharmacological management, others are not given to reduce the severity and disability of low back pain. So at present many non pharmacological techniques are available to reduce pain. Guided Imagery is one of the cognitive therapy to reduce pain. So the researcher was interested to select the study to assess the effectiveness of Guided Imagery technique in reducing low back pain perception and low back pain disability among third trimester antenatal mother.

Need and significance of the problem

Pregnancy related low back pain is a common complaint that occurs in 60-70% of pregnancies and can be defined as pain between the 12th rib and the gluteal folds/pubic symphysis during the course of pregnancy. This pain is not the result of a known pathology such as disc herniation and can begin at any point during pregnancy. Although most cases are mild, approximately one third of women experience severe pain. Pregnancy related low back pain has been coined multiple times and can be referred to as one of the following pattern: Low Back Pain, Peripartum Posterior Pelvic Pain , Pregnancy-related low back pain . The prevalence of pregnancy related low-back pain is the highest in the third trimester. One of the

more common reasons is a condition called Diastasis Rectus Abdominis , which is the separation of the Rectus Abdominal at the Linea Alba, leading to poor posture and Low back Pain.

Low back pain is a minor disorder experienced by pregnant women at third trimester because of loosening of the pelvic ligament. Studies regarding the epidemiology of pregnancy related back pain , rates ranges from 25% to 90% with most studies estimating 50% of women suffering from severe low back pain .One third of them will suffer from severe pain which will reduce their quality of life . The majority of women affected in their first pregnancy, 80% of women report that it affects their routine and 10%of them report that they are unable to work.

Prevalence of musculoskeletal dysfunctions and general discomforts are very common in pregnancy period. But they do not report such discomforts until it affects their daily routine. Understanding the discomforts that are commonly prevalent during pregnancy will help health professionals to form a structured intervention as a part of prevention, which will in turn help the women to take care of their health during pregnancy.

The National Centre for Health Statistics (2005) reported that the prevalence of low back pain during pregnancy is of 72% in India.

Preetha Ramachandra(2009) conducted a study on prevalence of musculoskeletal dysfunction among 261 Indian pregnant women . The results have been categorized across 3 trimesters with ,30 pregnant women in the 1st trimester 65 women in 2nd trimester and 116 women in their 3rd trimester ,the result shows that 42% of women affected by low back pain. The incidence of low back pain during

pregnancy is relatively high and researchers worldwide have suggested that it may between vary 30% to 70%.

Guided imagery is related to cognitive behavioral therapy and is a risk free non invasive complementary treatment for pain that has recommended by American chronic pain association. Guided Imagery leads a person through a process that allows them to shift their focus often distracting or alleviating their attention for their comfort to become more comfortable and enjoyable relaxation.

Farzad Najafipour (2014) conducted a study to assess the effects of imagery technique on chronic low back pain among 78 persons with low back pain in health insurance research centre Tehran, Iran . The low back pain intensity (Visual Analog Scale) and the disability index (Oswestry questionnaire) were assessed at the admission time and provided 12 weeks of Guided Imagery intervention. . The mean of pain intensity changed favorably from 7.53 ± 1.07 to 4.2 ± 1.4 in the control group and from 7.45 ± 1.1 to 2.44 ± 1.09 in the experimental group. The mean Oswestry disability index changed favorably from 24.54 ± 1.45 to 7.77 ± 2.05 in the control group and from 24.79 ± 1.52 to 4.51 ± 1.17 in the experimental group. The estimated mean difference between the groups was in favor of imagery technique (95% CI, $P < 0.001$). The study concluded that the low cost imagery technique was effectiveness in reducing low back pain.

Belleruth Naparstek ,IJCE (2008), states that Guided imagery is an excellent intervention for the unique demands of pregnancy and childbirth, delivering a readymade, complementary therapy for childbirth professionals to include in their tool kit. This article explores the ways that imagery takes the listener beyond simple relaxation to set the stage for productive and confident labor, enhance appreciation for the miracle of the body, focus breathing, reduce pain and promote a greater sense of

connectedness with the baby. It describes recent research showing efficacy, offers samples of its evocative language, and provides practitioner tips for optimal use.

The high incidence of pain disability during pregnancy, highlight the increasing use of narcotics for pain management through the ante partum period. Between the years of 1999 and 2010 deaths due to from opioid pain relievers has increased fivefold in the United States. It is important to provide more multimodal balanced pain management strategies. While there is increasing awareness and use of non pharmacological approaches in the management of pain. One of the non pharmacological management is Guided Imagery technique. So the researcher was impressed to select the study to assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers .

Statement of problem

A study to assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers.

Objectives

1. To assess the level of low back pain perception and low back pain disability before and after intervention among antenatal mothers
2. To assess the effectiveness of guided imagery technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers.
3. To correlate the level of low back pain perception and low back pain disability among third trimester antenatal mothers.
4. To determine the association between pretest level of low back pain perception and low back pain disability with selected demographic and clinical variables of third trimester antenatal mothers.

Hypotheses

H1: There is significant reduction in low back pain perception after Guided Imagery Technique among third trimester antenatal mothers.

H2: There is significant reduction in low back pain disability after Guided Imagery Technique among third trimester antenatal mothers.

H3: There is a significant association between level of low back pain perception and low back pain disability and selected demographic and clinical variables of third trimester antenatal mothers.

Operational Definition

Effectiveness

In this study it refers to the Guided Imagery Technique achieving the desired effect of reduction in low back pain perception ad low back pain disability among third trimester antenatal mothers.

Guided Imagery Technique

Guided Imagery Technique is a cognitive behavioral technique and simple relaxation technique in order to manage pain.

In this study, guided imagery is a convenient and simple relaxation technique in order to manage pain for 15 minutes daily for 7 days, with the use of video and audio provided to the third trimester antenatal mothers.

Low Back Pain Perception

Low back pain is caused by relaxation of sacroiliac joint which is due to increased hormones (relaxin) releasing in slight joint and muscle relaxation and exaggerated lumbar and cervico thoracic curves caused by changes in the center of gravity from the enlarging abdomen and breast.

Low Back Pain Disability

The limitations of person's performance compared with that of fit person. The antenatal mothers activities of daily living and specific functioning that might be disturbed by low back pain. The antenatal mother rate their perceived disability on different items personal care, lifting, walking, sitting, standing, sleeping, and social life.

Third Trimester Antenatal Mother

Pregnancy mother during her 25-40 weeks of gestation

Assumption

- Guided Imagery Technique will reduce low back pain perception and low back pain disability among third trimester antenatal mothers..

De limitation

- Data collection is delimited for 4 weeks
- Antenatal mother who were in 25-40 weeks of gestation

Projected outcome

The Guided Imagery Technique will reducing low back pain perception and low back pain disability among antenatal mothers.

CONCEPTUAL FRAMEWORK

The researcher adopted **Modified J.W.Kenny's** open system model (1990) based on input, throughput, and output. Modifided J.W.Kenny's adopted open system model which was aimed at to focus on effectiveness of Guided Imagery Technique in reduction of low back pain perception and low back pain disability among third trimester antenatal mothers.

Input

Based on **Modified J.W.Kenny's** open system model input can be matter , energy and information from the environment . On present study .environment refers to home and input refers to assess the low back pain perception assessed by numerical pain rating scale and low back pain disability, while in personal care , sitting ,standing, sleeping, social life, employment, and lifting assessed with the help of modified Oswestry low back pain disability .

Throughput

According to J.W.Kenny's , the matter ,energy and information are continually processed through the system ,which is also called complex transformation known as throughput process (i.e) energy and information for the maintenance of homeostasis of the system. In the present study process includes observing Guided Imagery Technique once a day for 7 days for third trimester antenatal mothers who had low back pain perception and low back pain disability . The first day pretest was conducted for the sample, and intervention given for 15 minutes for 7 days .On the 3rd day, 5th day ,and 7th day after intervention the post test assessment was done by modified Oswestry low back pain disability questionnaire , and pain perception was assessed by numerical pain rating scale.

Output

J.W.Kenny ‘s noted after processing the input and throughput, the system returns to the output energy, information to the environment as an altered state in low pain perception and low back pain disability. Change is a feature of the process that is observable and measurable as output which should be different from that which is entered into system . In the present study , the output is a reduction of low back pain perception and low back pain disability among third trimester antenatal mothers with low back pain.

Feed back

Reduction in the level of low back pain perception and low back pain disability among third trimester antenatal mother with low back pain.

Summary

The chapter dealt with the background of the study, need for the study, statement of problem, objectives of the study, hypothesis, operational definition , assumption, delimitation ,projected out come and conceptual framework of the study.

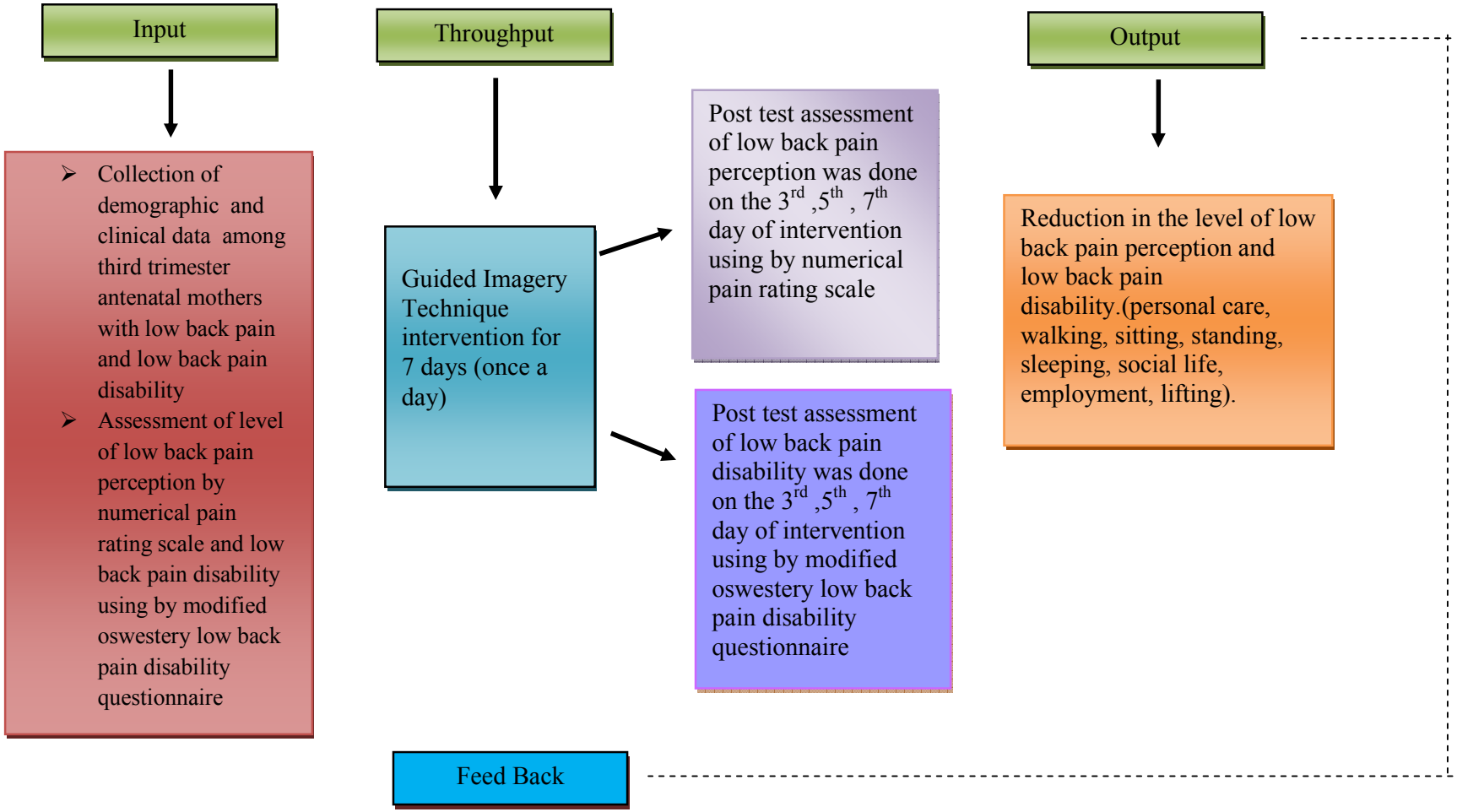

Figure III : Modified JW.Kenny's open system Model

CHAPTER – II

REVIEW OF LITERATURE

A literature review is a crucial early task for quantitative studies which helps to shape the research questions, contribute to the argument about the need for a new study, and suggest appropriate methods and points to a conceptual or theoretical framework. (Polit ,2009).

The review of literature was done from published articles, text book, and report and Medline search.

The Literature Review Has Been Organized Under The Following Headings.

1. Review of literature related to incidence and prevalence of low back pain among Antenatal mothers.
2. Review of literature related to Guided Imagery technique in reducing low back pain.
3. Review of literature related to other interventions in reducing low back pain among Antenatal mothers.

1.REVIEW OF LITERATURE RELATED TO INCIDENCES AND PREVALENCE OF LOW BACK PAIN AMONG ANTENATAL MOTHERS

Maria Joa o mota (2014) conducted a study to investigate the self reported prevalence and impact of low back pain during pregnancy in primiparous and multiparous women and their treatment seeking rationales and experience including their use of physiotherapy among 71 postpartum women who experienced low back pain during pregnancy . The study results shows that that low back pain were in slightly more frequent in primiparous (n=40 ;56.3%) than the multiparous

(n=31;43.7%).Women with low back pain were significantly older($p<0.001$) and reported more sleep disturbance ($p=0.026$) than primiparous women with low back pain. Low back pain prevented women performing their daily activities (n=41;57.7%) and worsened with the advance of pregnancy (n=55;77.5%) yet 93% (n=66) of these women received no treatment . The study concluded that low back pain is a prevalent and important clinical condition affecting the daily life of pregnant women.

Bishop.A (2013) conducted a cross sectional survey to assess the current management of pregnancy related low back pain among 1093 physiotherapist in UK. The data were collected by a structured questionnaire. The overall response rate was 58% (629/1093) had experience of treating women with pregnancy related low back pain and were included in the analysis .The most common reported treatment was home exercise (74%) , and acupuncture (26%).

Hafsa usmani (2012) conducted a study to assess the effectiveness of structured teaching programme on knowledge regarding low back pain in pregnancy among 60 primigravida mother attending antenatal OPD in SNR hospital at kolar district Karnataka .A non probability convenient sampling technique was used to select the sample .The data were collected by structured knowledge questionnaire regarding low back pain. The results shows that 16% of subjects had low level of knowledge 32% of subjects had medium level of knowledge , and 62% of subjects had high level of knowledge.

Preetha Ramachandra, et al (2009) conducted a study on prevalence of musculoskeletal dysfunction among 261 Indian pregnant women . The results have been categorized across 3 trimesters with 30 pregnant women in the 1st trimester 65 women in 2nd trimester and 116 women in their 3rd trimester . From that 42% of

women were affected by low back pain. The incidence of low back pain during pregnancy is relatively high in third trimester and researchers worldwide have suggested that it may between vary 30% to 70%..

Eravermani (2007)conducted a to study to assess the pregnancy related low back pain among 227 women selected by in Royal Liverpool hospital , UK . The samples were selected by random sampling method. The data were collected by structured knowledge questions and the intensity of pain was assessed by visual analogue scale. The study results shows that 160 women had low back pain in late pregnancy period.

Lee Shuang, (2007) conducted a cross sectional study to determine the prevalence of pregnancy related low back pain among 857 pregnant women attending antenatal clinic in Western turkey. The simple random sampling method was used to select the sample. Data were collected regarding level of pain prevalence and intensity of pain. The prevalence of low back pain among the pregnant women was 78 %.The intensity of the pain was assessed by visual Analogue scale. The results showed that 32.2% pregnant women had severe low back pain, 62.6% had moderate low back pain and 5.2% had mild pain.

Ayanniyio, et al (2006) conducted a study to assess the prevalence and pattern of back pain among pregnant women attending antenatal clinics in selected health care facilities, among 2187 pregnant women antenatal clinics in Ibadan and Ogbomoso, Nigeria , The data were collected by using structured close ended questionnaire . The study results showing that pain site among 1421 subjects with back pain was low back pain, 669 subjects were posterior pelvic pain , 97 subjects were high back pain . The study concluded that back pain is a common and real complaint in pregnancy.

2.REVIEW OF LITERATURE RELATED TO GUIDED IMAGERY TECHNIQUE IN REDUCING LOW BACK PAIN

Farzad Najafipour, et al (2014) conducted a study to assess the effects of imagery technique on chronic low back pain among 78 persons with low back pain in health insurance research centre Tehran, Iran . The low back pain intensity (Visual Analogue Scale) and the disability index (Oswestry questionnaire) were used to collect the data .After 12 weeks of Guided Imagery intervention. , the mean of pain intensity changed favorably from 7.53 ± 1.07 to 4.2 ± 1.4 in the control group and from 7.45 ± 1.1 to 2.44 ± 1.09 in the experimental group. The mean Oswestry disability index changed favorably from 24.54 ± 1.45 to 7.77 ± 2.05 in the control group and from 24.79 ± 1.52 to 4.51 ± 1.17 in the experimental group. The study concluded that the low cost Guided Imagery technique was effectiveness in reducing low back pain.

Belleruth naparstek (2013) conducted a comparative study to assess the Guided imagery technique and physical therapy for patient with low back pain among 40 patients with low back pain in UK .The samples were selected by random sampling method. The data were collected by Visual Analogue Scale .The study found that patient in both groups improved the mean pain score was 2.7 in Guided imagery and 2.4 with the physical therapy group .The average improvements were not different between groups .The study concluded that patient with chronic low back pain did the Guided imagery technique had better improvement than extended physical therapy.

Muhammad khan (2011) conducted a study to assess the effectiveness of Guided Imagery with general exercise and general exercise alone in the management of chronic low back pain among 54 patient in poly clinic in Karachi, The samples

were randomly assigned to two group. The groups received the treatment for 12 weeks, The clinical assessment was performed by visual analog scale and Ronold Morris disability questionnaire . The study results shows that both group showed statistically significant improvement in outcome measures p=0.00. The study concluded that the both interventions are effective in treating chronic low back pain, however Guided Imagery and General Exercise are clinically more effective than general exercise alone.

Nataha .E(2010) conducted a study to assess the effectiveness of Guided Imagery for treatment of chronic low back pain among 64 older adults in Philadelphia .The samples were selected by convenient sample method ,and the data were collected by visual analog scale. The study results shows that compared to the control group the intervention group displayed significant improvement in the chronic low back pain (p=0.008). The study concluded that the Guided Imagery technique may lead to improvement in physical function and reduction in low back pain.

Devon, (2010) conducted a study to assess the effectiveness of Guided Imagery for musculoskeletal pain among 40 patients with musculoskeletal pain in peninsula medical school. The samples were selected by convenient sample method. The data were collected by structured questionnaire. The results revealed that Guided Imagery leads to a significant (p=0.002) reduction of musculoskeletal pain .

Victoria menzies RN, PhD (2006) conducted a clinical experimental study on the effects of guided imagery on outcome of low back pain, functional status and self efficiency in persons diagnosed with low back pain ,among 48 person in Iron for 10 weeks. The samples were selected by random sampling method and the data were collected by low back pain questionnaire. The study result shows low back pain

decreased over time in the GI group compared to the usual care group (p=0.03). The GI group significantly improved their self-efficacy for managing low back pain, whereas the usual care alone group did not show any difference over time.

3. Review of Literature Related To Other Interventions Reducing Low Back Pain Among Antenatal Mother.

Aknese ZB (2014) conducted a study to assess the effects of progressive muscle relaxation exercise accompanied by music on low back pain and quality of life during pregnancy among 66 in pregnant women at Newyork , The samples were divided in to two groups 33 samples were in control group and 33 samples were in experimental group. The data were collected by Visual Analogue Scale and structured questionnaire were used to assessed the quality of life .The results shows that, after 4wks of intervention the experimental group had significant reduction in low back pain score of ' t ' value was 1.96. It is significant at 0.05 level . In the experimental group samples experienced a greater decrease in perceived pain and quality of life than the control group.

Waivrokpam Reepadevi (2012) conducted a study to evaluate the effectiveness of demonstration regarding posture management on reduction of low back pain among primigravida women attending antenatal outpatient department in selected hospital in Bangalore .A purposive sampling technique was used to select the sample of 40 , The data were collected by Visual analogue scale and observational checklist. The result shows that the t value was 3.49 ($p<0.0001$), The posture maintenance significantly reduce the intensity of low back pain .

Roberto Rivera Diaz, (2012) conducted a study to assess the management of non obstetric pain during pregnancy among 300 women in Colombia. The women were selected by purposive sampling technique ,The data were collected by structured questionnaire, The study results shows that 42% of women had low back pain the interventions include physical therapy, acupuncture, exercise, Trans Cutaneous Electrical Nerve Stimulation, and Acetaminophen , The conclusion that no treatment is 100% effective , and that the combination of standard prenatal care together with exercise lead to a reduction in back pain.

Garshabi. A (2010) was conducted a experimental study to assess the effect of stretching exercise during pregnancy in reducing back pain and by using randomized design .There were 107 samples in experimental group and 105 women in control group .All the women were in gestational weeks of 17-22 participated in the exercise program for a period of 12 weeks .After the program. The experimental group showed significant reduction in the intensity of pain t= 7.21 (> 0.0001). The study concluded that stretching exercise during second half of pregnancy significantly reduced the intensity of low back pain.

Suputtitada (2009) was conducted a study to assess the effect of pelvic tilt exercise on low back pain among pregnant women in pre natal clinic. A single centered randomized and controlled study was done among 67 primigravida women, 32 women in experimental and 35 women in control group, over a period of 2 months during the third trimester .The study reveals the unpaired t test 9.14 at the level of $p<0.05$ and that shows the pelvic tilt exercise during the third trimester in primi gravidas could decrease low back pain intensity without incidence of low birth weight and neonatal complications.

Anlet , (2006) conducted a study to determine the effect of music therapy on low back pain relief among 62 pregnant women in Fatemieh hospital ,Hamadan, Iran. They were selected by using convenience sampling and were divided randomly in two groups. The first group (control) received routine home exercise and the second group (intervention group) received the music therapy .The intensity of pain was determined using a standard pain number rating scale. The statistical analysis of data showed significant difference in intensity of pain between the two groups (P= 0.0001). The researcher concluded that the music therapy is easy to perform and without any risk and also has low expenses it is recommended for low back pain relief during antenatal period .

Nirubama singh M.O.T (1998) conducted a experimental study of prevention and management of low back pain in pregnant women through the use of exercise program and education book let .15 pregnant mothers with gestational period of 20-30 weeks with back pain were taken for study . The data were collected by the modified Oswestry low back pain disability questionnaire (MOLBPDQ)and visual analogue scale(VAS) The Results from the statistical analysis show that there were highly significant results in MOLBPDQ in the areas of Intensity, Sitting ,Sleeping, Personal Care, Walking, Standing, Social Life and Traveling t= 13.69 (p<.OO5) ,and the VAS t= 5.47 (P<.OO5) was highly Significant.

CHAPTER- III

RESEARCH METHODOLOGY

The Research methodology includes research approach ,research design ,variables ,the setting of the study ,population , sample , sampling technique , sample size, development and description of the tool, validity, reliability, pilot study, intervention, data collection procedure , plan for data analysis and protection of human rights.

Research approach

Quantitative Experimental Research Approach was used in this study

Study design

In this study, researcher selected quasi experimental one group pre test Post test time series design

Group	Pre test	Intervention	Post test1	Intervention	Post test 2	Intervention	Post test 3
E	O1	x	O2	x	O3	x	O4

Key

E- Experimental group

O1- pretest

X- Intervention

O2-Post test 1(3^{rd} day)

O3- post test 2 (5^{th} day)

O4-post test 3 (7^{th} day)

Variables

Independent variable: Guided Imagery Technique

Dependent variable:

i. Perception level of Low back pain

ii. Low back pain disability

Setting of the study

The Subjects were selected from villages (Kalanthapanai, Kadambankulam, Visuvasapurum, Ganeshapurum) nearby Vallioor which is 8 km away from Nehru Nursing college, Vallioor.

Population

The entire set of individuals or objects having some common characteristics selected for the research study

In this study, the target population comprised antenatal mothers with low back pain perception and low back pain disability

Accessible population

The aggregate of cases that conform to designated inclusion or exclusion criteria and that are accessible as subjects of the study.

The accessible population was antenatal mothers who were in25-40 weeks of gestational weeks and having the complaints of severe and moderate low back pain perception and low back pain disability.

Sample

A part or subset of population selected to participate in research study. The study population consists of antenatal mothers who were full filled the inclusion criteria.

Sampling technique

The process of selecting sample from the target population to represent the entire population. In this study purposive sampling technique was adopted

Sampling procedure

The Modified Oswestry low back pain disability questionnaire and numerical pain rating scale assessment was used for the selection of sample with moderate and severe low back pain and low back pain disability.

Sample size

It is a number of subjects, events, behavior, or situation that are examined in a study. A sample of 30 third trimester antenatal mothers with low back pain who were living in villages (Kalanthapanai, Kadambankulam, Visuvasapurum, Ganeshapurum) nearby Vallioor which is 8km away from Nehru nursing college.

Criteria For Sample Selection

Inclusion Criteria

- Antenatal mothers who were in 25-40 weeks of gestational age
- Antenatal mothers who were having severe and moderate low back pain perception and low back pain disability
- Antenatal mothers who were willing to participate
- Antenatal mothers who can understand and speak tamil

Exclusion Criteria

- Antenatal mothers who were below 24 weeks of gestation
- Antenatal mothers who had any obstetrical and morbidity complication
- Antenatal mothers who were taking ayurvedic medicines for pain

Research Tool And Technique

The instrument consists of two sections.

Section A

Demographic variable consists of age, residential area, education, occupation, dietary pattern, and monthly income.

The Clinical variable includes gestational age and number of gravida.

Section B

1. **Numerical pain rating scale**

Observing the low back pain with the help of Numerical pain rating scale.

Scoring key

Numerical pain rating scale

S.No	Pain Score Level	Nature and Description of Pain Score Level
1.	No pain	The pain score level is 0
2.	Mild pain	The pain score level from 1 – 3
3.	Moderate pain	The pain score level from 4 – 6
4.	Severe pain	The pain score level from 7 – 10

2. **Modified Oswestry low back pain disability questionnaire** It consists of personal care , walking, sitting, standing ,sleeping ,social life, employment, and lifting.

Scoring Key

Modified Oswestry Low Back Pain Disability Questionnaire

S.No.	Low Back Pain Disability	Nature and Description of Low Back Pain Disability
1.	Mild symptoms	The disability symptoms score level from 1-8
2.	Moderate symptoms	The disability symptoms score level from 9-16
3.	Severe symptoms	The disability symptoms score level from 17-24

Validity

The content validity of the tools was established on the opinion of one expert in the field of obstetrics and gynecologist and four maternity nursing experts. The tool was modified as per the consensus of all the experts and the tool was finalized

Reliability

Numerical pain rating scale was a standardized scale. It found to be reliable $r = 0.9$

Modified Oswestrey low back pain disability questionnaire $r = 0.8$ was determined by test retest method. Hence the tool was highly reliable.

Pilot study

The pilot study was a trial run for the major study. The tool was used for the pilot study to test the feasibility and practicability. The pilot study was conducted in village near by Vallioor. The period limited for pilot study was one week.

- The researcher introduced herself to the subjects and established rapport with the subjects. 5 samples were selected for the pilot study by using purposive sampling technique. Data pertaining to demographic and clinical variables were collected by structured self administered questionnaire. Researcher assessed the pre test and post test level of low back pain and disability symptoms by using numerical pain rating scale and modified Oswestry low back pain disability questionnaire.
- Data collection was done on the same setting for 7 days 5 samples were selected for the interventional study. The pilot study result shows that the intervention was found to be feasible, effective and easy to administer.

Data collection procedure

The researcher introduced herself to the mother, explained the purpose of study and procedure to the mother and oral consent was obtained . The pretest score was assessed by using the structured questionnaire, Guided Imagery intervention (15 minutes) was provided to the mother for 7 days. On the 3^{rd} ,5^{th} ,7^{th} day of intervention the post test was assessed by Numerical pain rating scale and modified Oswestery low back pain disability questionnaire .

Intervention

- Introduction phase (The researcher introduce herself to the mother),
- Explain the nature and purpose of study ,
- Get the oral consent from the mother,
- Select calm and quite area with privacy,
- Make the mother to sit comfortable ,
- Pre test assessment of low back pain perception and low back pain disability done by a structured questionnaire,
- Explain the Guided Imagery technique to the mother
- Display the video with background music for 8 minutes, which was continued with audio comments.
- Advised the mother to slowly close her eyes and focus on her deep breathing and encouraged her to relax by the help of audio comments for 7 minutes
- Hence the intervention was given once a day for a period of 15 minutes each day for consecutive 7 days
- End of the 3^{rd} , 5^{th} , 7^{th} day, after the intervention the post test was done to analyze low back pain perception and low back pain disability with Numerical pain rating scale and Oswestery low back pain disability questionnaire.

Data analysis

Both descriptive and inferential statistics were used.

Descriptive Statistics

- The frequency and percentage distribution of demographic and clinical variables.

- Mean and standard deviation was used to assess the pre and post test level of pain perception and disability (among third trimester antenatal mother**)**.

Inferential Statistics

- Paired‘t’-test was used to compare the pre and post test level of pain perception, and disability among third trimester antenatal mother.
- Karl pearson’s correlation of coefficient was used to find out the correlation between low back pain perception and low back pain disability.
- Chi-square was used to associate the pre test level of pain perception, disability among third trimester antenatal mothers with their selected demographic and clinical variables.

Ethical Consideration

The proposed study was conducted after the approval of the research committee of college. The oral consent of each individual was obtained before data collection. Assurance was given to the study participants regarding the confidentiality of the data collected.

Summary

This chapter dealt with research approach, research design, variables, the setting, population, sample, sampling techniques, sample size, development and description of tool, validity, reliability, pilot study, intervention, data collection, procedure, plan for data collection, and protection of human subject.

CHAPTER - IV

ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of the data collected from 30 third trimester antenatal mothers in selected villages related to their effectiveness of Guided Imagery technique in reducing low back pain

Polit and Hunger (1999) state that statistical analysis is a method of rendering quantitative information in a meaningful and intelligible manner. Statistical procedure enables the researcher to organize, analyze, evaluate, interpret and communicate numerical information meaningful.

The purpose of analysis was to reduce the collected data to an intelligible and interpretable form, so that the relation of research problem can be studied and tested. The results were computed by using descriptive and inferential statistics.

The study findings are presented in sections as follows

Section I: Data on demographic and clinical variables among third trimester antenatal mothers with low back pain perception and low back pain disability.

Section II: Data on the assessment of level of low back pain perception and low back pain disability among third trimester antenatal mothers with low back pain

Section III: Data on effectiveness of Guided Imagery Technique in reducing the level of low back pain perception and low back pain disability among third trimester antenatal mothers with low back pain

Section IV: Data on relationship between level of low back pain perception and low back pain disability among third trimester antenatal mothers with low back pain

Section V: Data on association between low back pain perception and low back pain disability among third trimester antenatal mothers with low back pain with their selected demographic and clinical variables

Section I

Data on demographic and clinical variables among third trimester antenatal mothers with low back pain perception and selected low back pain disability

Table 1: Frequency and percentage distribution of demographic variables of antenatal mothers with low back pain perception and low back pain disability.

n = 30

S.NO	Demographic variables	Frequency (f)	Percentage (%)
1	Maternal age in years		
	a) 18-21 years	3	10
	b) 22-25 years	19	63.33
	c) 26-29 years	8	26.67
	d) Above 30 years	0	0.00
2	Residential Area		
	a) Rural	30	100
	b) Urban	0	0
3	Educational status		
	a) No formal education	0	0
	b) Primary education	12	40.00
	c) Graduate	16	53.33
	d) Post graduate	2	6.67
4	Occupation		
	a) Home maker	15	50
	b) Self employee	11	36.66
	c) Private job	2	6.67
	d) Government job	2	6.67
5	Diet		
	a) Non vegetarian	29	96.7
	b) Vegetarian	1	3.3
6	Income		
	a) <Rs.5000	0	0.00
	b) Rs.5001-10,000	21	70.00
	c) Rs .10,001-15,000	6	20.00
	d) >Rs.15000	3	10.00

Table 1 reveals with regard to age among 30 third trimester antenatal mothers, 3(10%) belong to 18-21 years , 19 (63.33%) belong to 22-22 years, and 8(26.67%) belong to 26-29 years.

Regarding residential area 30(100%) all the third trimester antenatal mothers from rural area.

Considering the educational status 12(40%) of them had primary education , 16 (53.33%) of them were graduate and 2 (6.67 %) of them were post graduate.

Regarding occupation; 15(50%) of them were homemakers, 11(36.66%) of them were self employed, 2(6.67%) of them were in private job and 2(6.67%) of them were in government job.

Considering the Dietary pattern 29 (96.7%) subjects had the habit of taking non vegetarian diet and only1 (3.3%) subject was taking vegetarian diet .

Regarding their monthly income ; 21(70%) fall in Rs.5001-10,000, 6(20 %) fall in Rs. 10,001-1500 , 3(10 %) fall in Rs .>15,000 category .

It was inferred that majority of the samples belongs to 22-25 years category of Age, were from Rural area, were Graduates ,and Homemakers , most of the samples were non vegetarian and belongs to the Income group of 5001-10,000 rupees .

Table 2 : Frequency and percentage distribution of clinical variables among third trimester antenatal mothers with low back pain perception and selected low back pain disability

n = 30

S.NO	Clinical variables	Frequency (f)	Percentage (%)
1	**Gestational age**		
	a) 25-28 weeks	4	13
	b) 29-32 weeks	18	60
	c) 33-36 weeks	8	26.67
	d) 37-40 weeks	0	0.00
2	**Number of gravida**		
	a) 1st	23	76.7
	b) 2nd	6	20
	c) 3rd	1	3.3
	d) 4th	0	0

Data from table 2 reveals with

Regarding the gestational age 4 samples (13.00%) belonged to 25-28 weeks 18samples (60%) of belonged to 29-32 weeks, and 8(27%) of them belonged to 33-36 weeks.

Regarding the number of gravida 23 (76.7%) of them were in primi gravida , 6 (20 %) of them were 2^{nd} gravida and 1(3.3%) had 3^{rd} gravid pregnancy . It was inferred that majority in gestational age is 29-32 weeks and were primi gravida.

Section II:

Data on the assessment of level of low back pain perception and low back pain disability among third trimester antenatal mothers with low back pain.

Table 3 : Data on frequency and percentage distribution of level of low back pain perception among third trimester antenatal mothers with low back pain

n=30

S.No	Days	Test	Level of low back pain perception					
			Mild		Moderate		Severe	
			f	%	f	%	f	%
1	1st day	Pre test	0	0.00	14	46.66	16	53.33
2	3rd day	Post test1	3	10	18	60	9	30.00
3	5th day	Post test2	9	30	18	60	3	10.00
4	7thday	Post test3	18	60	12	40	0	0.00

The results shown in table 3 shows that in pre test 14(46.66%) subjects had moderate level of low back pain perception and 16 (53.33%) subjects had severe low back pain perception and during post test 1 on 3rd day 3 (10%) subjects had mild pain, 18 (60%) subjects had moderate level of low back pain perception and 9(30%) subjects had severe low back pain perception , during post test 2 on the 5th day 9 (30%) subjects had mild low back pain perception 18 (60%) subjects had moderate level of low back pain perception 3(10%) subjects had severe low back

pain perception ,during post test 3 on 7th day 18(60%) subjects had mild level low back pain perception and 12 (40%) subjects had moderate level of low back pain perception .

It was inferred that in pre test16(53.33%) had severe low back pain perception and 14 (46.66%) had moderate level of low back pain perception. After the 7th day of Guided Imagery Technique, there was 18(60%) samples in mild level low back pain perception. 12 (40%) samples in , moderate level low back pain perception , and There was no samples in severe low back pain perception category.

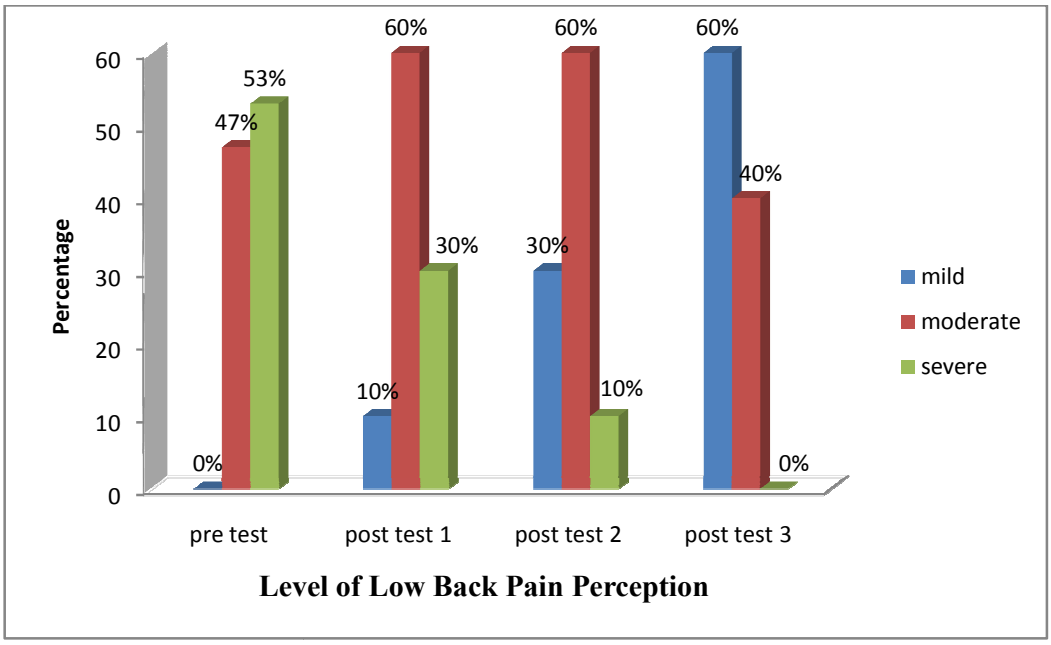

Figure : IV - Pre Test And Post Test Level Of Low Back Pain Perception Among Third Trimester Antenatal Mothers.

Table 4: Data on frequency and percentage distribution of level of low back pain disability among third trimester antenatal mothers with low back pain

n= 30

S.No	Days	Test	low back pain disability					
			Mild		Moderate		Severe	
			f	%	f	%	f	%
1.	1st day	Pre test	0	0.00	12	40	18	60
2	3rd day	Post test1	0	0.00	17	56.7	13	43.3
3	5th day	Post test2	4	13.33	26	86.67	0	0.00
4	7th day	Post est 3	18	60.00	12	40	0	0.00

The table : 4 shows that in pre test 12 (40%)subjects had moderate level of low back pain disability and 18(60%) subjects had severe low back pain disability, during post test 1 on the 3rd day 17(56.7) subjects had moderate level of low back pain disability ,13 (43.3) subjects had severe low back pain disability, during post test 2 on the 5th day 4(13.33%) subjects had mild level of low back pain disability and 26 (86.67%) subjects had moderate level of low back pain disability, during post test 3on the 7th day 18(60%) subjects had mild level low back pain disability and 12(40%) subjects had moderate level low back pain disability.

It was inferred that in pre test18(60%) had severe low back pain disability and 12 (40 %) had moderate level of low back pain disability .After the 7th day of Guided Imagery technique , 18(60%) samples in mild level low back pain disability, 12 (40%) samples in moderate level low back pain disability. There was no samples in severe level low back pain disability.

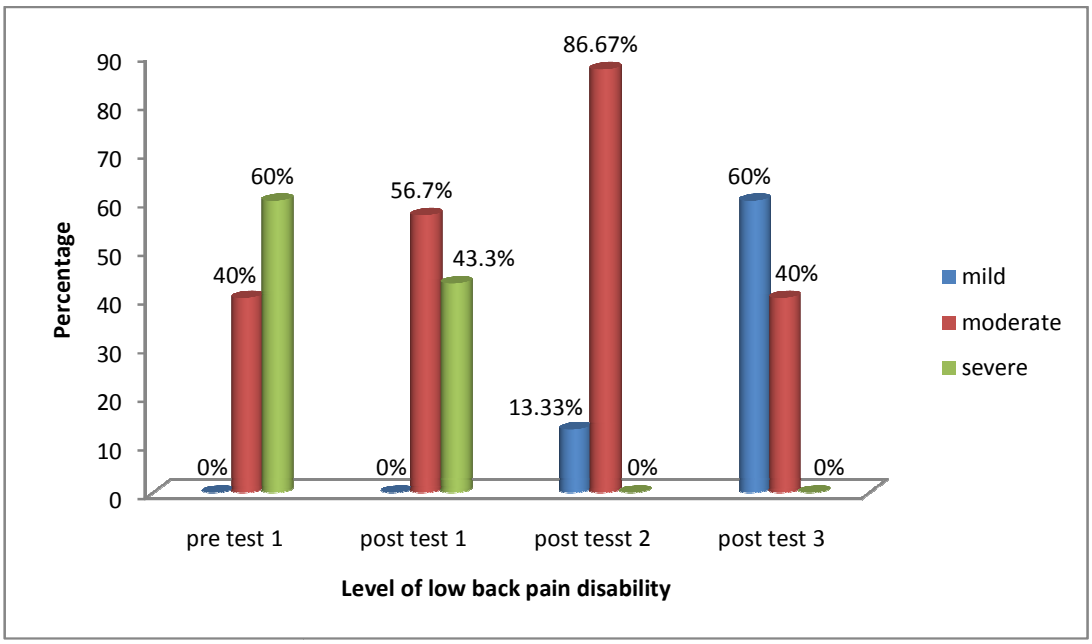

Figure : v - Pre and Post test level of low back pain disability among third trimester antenatal mother

Section III

Data on effectiveness of Guided imagery on reducing level of low back pain perception and low back pain disability among third trimester antenatal mothers

Table 5:Mean, Standard Deviation and t-value of pre test and post test level of low back pain perception among third trimester antenatal mothers

n=30

S.NO	Days	Test	Mean	SD	Mean difference	Paired 't'test	Table value
1	1st day 3rd day	Pre test Post test 1	6.56 5.66	0.86 1.26	0.90	6.13*	29df 2.042
2	3rd day 5th day	Post test 1 Post test 2	5.66 4.53	1.26 1.35	1.13	6.37*	29df 2.042
3	5th day 7th day	Post test 2 Post test 3	4.53 3.56	1.35 0.77	0.97	5.49*	29df 2.042
4	1st day 7th day	Pre test Post test 3	6.56 3.56	0.86 0.77	3.0	20.85*	29df 2.042

***significant at 0.05 level**

Table 5 Shows that during post test 1 , the 3rd day post test1 mean level of low back pain perception score was 5.66 which was lower than the pre test mean level low back pain perception score of 6.56 among third trimester antenatal mothers. The obtained t value 6.13 was significant at 0.05 level ($p < 0.05$).

During post test2 , the 5th day post test mean level of low back pain perception score was 4.53 which is lower than the 3rd day post test mean level low back pain perception score of 5.66 among third trimester antenatal mothers The obtained 't' value 6.37 was significant at 0.05 level ($p< 0.05$) .

on the 7th day, the post test mean level of low back pain perception score was 3.56 lower than the 5th day post test mean level of low back pain perception score was 4.53 among third trimester antenatal mothers. The obtained't' value 5.49 was significant at 0.05 level ($p< 0.05$) .

On the 7th day, the post test mean level of low back pain perception score was 3.56 which is lower than the 1stday pre test mean level of low back pain perception score 6.56 among third trimester antenatal mothers. The obtained t value 20.85 was highly significant at 0.05 level ($p< 0.05$).

It was inferred that, all the post test mean level low back pain perception score was lower than the pre test mean level of low back pain perception score. Which shows that Guided imagery technique was highly effective in reducing back pain perception among third trimester antenatal mothers with low back pain.

Table 6 : Mean, Standard Deviation and 't'-value of pre test and post test on low back pain disability among third trimester antenatal mothers

n=30

S.NO	Days	Test	Mean	SD	Mean difference	Paired 't'test	Table value
1	1st day 3rd day	Pre test Post test 1	17.60 16.30	2.93 2.19	1.30	6.04*	29df 2.042
2	3rd day 5th day	Post test 1 Post test 2	16.30 12.33	2.19 2.26	4.13	8.52*	29df 2.042
3	5th day 7th day	Post test 2 Post test 3	12.33 9.53	2.26 2.08	2.70	7.76*	29df 2.042
4	1st day 7th day	Pre test Post test 3	17.60 9.53	2.93 2.28	8.13	15.93*	29df 2.042

***significant at 0.05 level**

Table: 6 shows that during post test 1 the 3rd day, the post test mean level of low back pain disability score was 16.30 which is lower than the pre test mean level low back pain disability score of 17.60 among third trimester antenatal mothers. The obtained 't 'value 6.04 was significant at 0.05 level ($p< 0.05$) .

During post test 2, the 5th day the post test mean level of low back pain disability score was 12.23 which is lower than the 3rd day post test mean level low back pain disability score of 16.30 among third trimester antenatal mothers. The obtained ' t ' value 8.52 was significant at 0.05 level ($p< 0.05$) .

During post test 3 the 7th day, the post test 3 mean level of low back pain disability score was 9.50 which is lower than the 5th day post test mean level low back pain disability score of 2.23 among third trimester antenatal mothers. The obtained 't' value 7.76 was significant at 0.05 level ($p< 0.05$) .

On the 7th day, the post test3 mean level of low back pain perception score was 9.50 which is lower than the pre test mean level of low back pain perception score of 17.60 among third trimester antenatal mothers. The obtained 't'value 15.92 was highly significant at 0.05 level ($p< 0.05$) .

It was inferred that , all the post test mean level low back pain disability score was lower than the pre test mean level of low back pain disability score .Which shows that Guided imagery technique was highly effective in reducing low back pain disability among third trimester antenatal mothers with low back pain .

Section IV

Data on relationship between level of low back pain perception and low back pain disability among third trimester antenatal mothers

Table 7: Data on relationship between mean, and 'r' value of low back pain perception and low back pain disability among third trimester antenatal mothers

n =30

S.no	Day	Test	Low back pain perception	Low back pain disability	'r'-value	Interpretation
			Mean	Mean		
1	1st Day	Pre test	6.56	17.60	0.86	High degree positive correlation
2	7th Day	Post test 3	3.56	9.53	0.72	High degree positive correlation

Table no 7 shows that the mean pre test the low back pain perception was 6.56and low back pain disability was 17.60. The relation between the low back pain perception and low back pain disability was measured by using Karl Pearson 's correlation co efficient and its value was r =0.86 ,which had high degree positive correlation.

During the post test 3 mean low back pain perception was 3.56, low back pain disability was 9.53. Relationship between the low back pain perception and low back pain disability was measured by using Karl Pearson's correlation coefficient and its value was r =0.72, which was high degree positive correlation. That is the low back pain perception decreases means back pain disability will also decreases.

Section - V

Data on association between low back pain perception among third trimester antenatal mother with their selected demographic and clinical variables

Table 8: Frequency, percentage and χ^2 distribution of low back pain perception and the selected demographic variables third trimester antenatal mother.

n=30

S.NO	Demographic variables	level of low back pain perception		χ^2 value	Table value
		moderate	severe		
		f	f		
1	Maternal age in years a) 18-21 years b) 22-25 years c) 26-29 years d) Above 30 years	1 9 4 0	2 10 4 0	0.53 NS	2df 5.99
2	Educational status a) No formal education b) Primary education c) Graduate d) Post graduate	0 10 4 0	0 2 12 2	11.2*	2df 5.99
3	Occupation a) Home maker b) Self employee c) Private job d) Government job	6 5 1 2	9 6 1 0	2.00 NS	3df 7.82
4	Dietary pattern a) Non vegetarian b) Vegetarian	13 1	16 0	1.15 NS	1df 3.8
5	Income a) <Rs.5000 b) Rs.5001-10,000 c) Rs .10,001-15,000 d) >Rs.15000	0 6 5 3	0 12 3 1	0.98 NS	2df 5.99

NS= Non significant, * significant at 0.05 level

Table 8 reveals that there was a significant association between educational status and low back pain perception and there was no association with selected demographic variables such as maternal age , education, dietary pattern , occupation and income

Table 9: Frequency, percentage and χ^2 distribution of low back perception and the selected clinical variables among third trimester antenatal mother.

n=30

S.NO	Clinical Variables	level of low back pain perception		χ^2 value	Table value
		Moderate	Severe		
		f	f		
1	**Gestational age**				
	a) 25-28 weeks	1	3	1.57	2 df
	b) 29-32 weeks	10	8	NS	5.99
	c) 33-36 weeks	3	5		
	d) 37-40 weeks	0	0		
2	**Number of gravida**				
	a) 1st	8	15	5.92	2 df
	b) 2nd	5	1	NS	5.99
	c) 3rd	1	0		
	d) 4th	0	0		

NS= Not significant

Table :9 shows that there was no association between the low back pain perception with the selected clinical variables such as gestational age and Number of gravida.

Data on association between low back pain disability among third trimester antenatal mother with their selected demographic and clinical variables

Table 10: Frequency, percentage and χ_2 distribution of low back pain disability and the selected demographic variables among third trimester antenatal mother.

n=30

S.NO	Demographic variables	level of low back pain disability		χ_2 value	Table value
		Moderate	Severe		
		f	f		
1	Maternal age in years				
	a) 18-21 years	1	2	0.90 NS	2df 5.99
	b) 22-25 years	7	12		
	c) 26-29 years	4	4		
	d) Above 30 years	0	0		
2	Educational status				
	a) No formal education	0	0	6.1*	2df 5.99
	b) Primary education	8	2		
	c) Graduate	4	12		
	d) Post graduate	0	2		
3	Occupation				
	a) Home maker	7	8	1.74 NS	3df 7.82
	b) Self employee	5	8		
	c) Private job	1	1		
	d) Government job	2	1		
4	Dietary pattern				
	a) Non vegetarian	11	18	0.96 NS	1df 3.8
	b) Vegetarian	1	0		
5	Income				
	a) <Rs.5000	0	0	2.1 NS	2df 5.99
	b) Rs.5001-10,000	9	12		
	c) Rs .10,001-15,000	1	5		
	d) >Rs.15000	2	1		

NS= Non significant , * significant at 0.05 level

Table 10 reveals that there was significant association between educational status and low back pain disability, and there was no association between low back pain disability with selected demographic variables such as maternal age , dietary pattern, occupation and income.

Table 11 : Frequency, percentage and χ_2 distribution of selected low back disability and the selected clinical variables among third trimester antenatal mother.

n=30

S.NO	clinical variables	level of low back pain disability		χ_2 value	Table value
		Moderate	Severe		
		f	f		
1	**Gestational age**				
	a) 25-28 weeks	1	3	0.58	2 df
	b) 29-32 weeks	8	10	NS	5.99
	c) 33-36 weeks	3	5		
	d) 37-40 weeks	0	0		
2	**Number of gravida**				
	a) 1st	8	15	2.00	2 df
	b) 2nd	3	3	NS	5.99
	c) 3rd	0	0		
	d) 4th	0	0		

NS= Not significant

Table 11 shows that there was no association between the low back pain disability with the selected clinical variables such as gestational age and Number of gravida.

CHAPTER-V

DISCUSSION

The purpose of the study was to assess the effectiveness of Guided Imagery technique on reducing back low pain perception and low back pain disability among third trimester antenatal mothers in selected villages The study was conducted by using Quasi experimental one group pre test post test time series design among 30 third trimester antenatal mothers. The demographic and clinical variable data were collected by the structured self administered questionnaire. Numerical pain rating scale and modified Oswestry low back pain disability questionnaire were used to assess the level of low back pain perception and selected low back pain disability among third trimester antenatal mothers.

The response were analyzed through descriptive statistics (Mean, Frequency, Percentage and Standard Deviation) and Inferential statistics (Paired 't' test, karl pearson's correlation, Chi – square). Discussions on the findings were arranged based on the objectives of the study.

Objectives of the study were

1. To assess the level of low back pain perception and low back pain disability before after intervention among third trimester antenatal mothers.
2. To assess the effectiveness of guided imagery technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers.
3. To correlate the level of low back pain perception and selected low back pain disability among third trimester antenatal mothers.

4. To determine the association between pre test level of low back pain and selected demographic and clinical variables of third trimester antenatal mothers.

1 . To assess the level of low back pain perception and low back pain disability before and after intervention among third trimester antenatal mothers

The findings shows that in pre test 14 subjects had moderate low back pain and 16 subjects had severe low back pain .During post test 1 on the 3rd day 3 subjects had mild pain, 18 subjects had moderate low back pain and 9 subjects had severe low back pain. During post test 2 on the 5th day 9 subjects had mild low back pain 18 subjects had moderate low back pain and 3 subjects had severe low back pain .during post test 3 on the 7th day 18 subjects had moderate low back pain and 12 subjects had moderate pain .

The finding shows that in pre test 12 subjects had moderate level of low back pain disability and 18 subjects had severe level of low back pain disability. During post test 1 on the 3rd day 18 subjects had moderate level of low back pain disability and 2 subjects had severe level low back pain disability. During post test 2 on the 5th day 4 subjects had mild level of low back pain disability and 26 subjects had moderate level of low back pain disability. During post test 3 on the 7th day 18 subjects had mild level low back pain disability and 12 subjects had moderate level of low back pain disability.

Maria Joa o mota (2014) The study findings revealed that low back pain was more frequent in primiparous (n=40 ;56.3%) than the multiparous (n=31;43.7%) women with low back pain were significantly older($p<0.001$) and reported more sleep disturbance ($p=0.026$) than primiparous women with low back pain. 57.7% of antenatal mothers felt that low back pain prevented the women from

performing their daily activities (n=41;57.7%) and worsened with the advancement of pregnancy (n=55;77.5%) from low back pain .93% (n=66) of these women received no treatment . It concluded that low back pain is a prevalent and important clinical condition affecting the daily life of pregnant women.

2. To assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers

The findings shows that On the 3rd day, the post test mean level of low back pain perception score was 5.66which was lower than the pre test mean level low back pain perception score of 6.56 among third trimester antenatal mothers. The obtained 't' value score was 6.13 so it is significant at 0.05 level ($p < 0.05$) .

On the 5th day, the post test mean level of low back pain perception score was 4.53 which was lower than the 3rd day post test mean level low back pain perception score of 5.66 among third trimester antenatal mothers. The obtained 't' value score was 6.37 .so it is significant at 0.05 level ($p < 0.05$) .

On the 7th day, the post test mean level low back pain perception score was 3.56 lower than the 5th day post test mean level of low back pain perception score of 4.53 among third trimester antenatal mothers. The obtained ' t' value score was 5.49 so it is significant at 0.05 level ($p < 0.05$) .

On the 7th day, the post test mean level of low back pain perception score was 3.56 which was lower than the pre test mean level low back pain perception score of 6.56 among third trimester antenatal mothers. The obtained 't' value score was 20.85 . It is highly significant at 0.05 level ($p < 0.05$).

The finding shows that on the 3rd day, the post test mean level of low back pain disability score was 16.30 which was lower than the pre test mean level low back pain disability score of 17.60 among third trimester antenatal mothers. The obtained 't' value of 6.04 was significant at 0.05 level ($p< 0.05$).

On the 5th day, the post test mean level of low back pain disability score was 12.23which was lower than the 3rd day post test mean level low back pain disability score of 16.30 among third trimester antenatal mothers. The obtained 't' value score of 8.52 was significant at 0.05 level ($p< 0.05$) .

On the 7th day, the post test mean level of low back pain disability score was 9.50 which was lower than the 5th day post test mean level low back pain disability score of 12.23 among third trimester antenatal mothers. The obtained 't' value score of 7.76 was significant at 0.05 level ($p< 0.05$).

On the 7th day, the post test mean level of low back pain disability score was 9.50 which was lower than the pre test mean level low back pain disability score of 17.60 among third trimester antenatal mothers. The obtained 't' value score of 15.92 was highly significant at 0.05 level ($p< 0.05$) . Hence the stated H1 hypothesis was accepted.

Belleruth naparstek (2013) .The study finding reveals that the mean back pain score were 2.7 in Guided imagery and 2.4 with the physical therapy group .The study concluded that patient with chronic low back pain did significantly improve with imagery technique with standard measure of pain and disability being comparable to those resulting from high quality , extended physical therapy ,Guided imagery technique was safe.

3.To correlate the level of low back pain perception and selected low back pain disability among third trimester antenatal mothers

In co relation between the low back pain perception and low back pain disability. On the first day pretest score was 0.86, which was high degree positive correlation. During 7^{th} day the post test 3 co relation between the low back pain disability and perception was 0.72,which was high degree positive correlation.

Aknese ZB (2014) .The study results reveals that, after 4wks of Guided Imagery intervention the experimental group perceived significant $p > 0.003$ improvement in low back pain reduction. The experimental group experienced a greater decrease in perceived pain and quality of life than the control group.

4. To determine the association between pretest level of low back pain perception and low back pain disability with selected demographic and clinical variables of third trimester antenatal mothers.

The study shows that there is association between low back pain perception and educational status there is no significant association between age, occupation, dietary pattern and income.

In the clinical variables there was no association between low back pain perception and gestational age and number of gravida.

The study findings revealed that there is association between low back pain disability and educational status and there is no association between age, occupation, dietary pattern, and income. In clinical variables there was no significant association between low back pain disability and gestational age and number of gravid.

Hafsa usmani (2012) The results revealed that knowledge regarding low back pain , 16% of subjects had low level of knowledge ,32% of subjects had medium level of knowledge , and 62% of subjects had high level of knowledge.

CHAPTER - VI

SUMMARY, FINDINGS, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

Summary of The Study

The aim of the study was to assess the effectiveness of Guided Imagery technique on reducing low back pain perception and low back pain disability among third trimester antenatal mothers in selected villages near by vallioor .

The study was experimental in nature. Based on the inclusion criteria selected a 30 third trimester antenatal mothers were selected by using purposive sampling technique. The data were collected by structured self administered questionnaire, pain perception was assessed by numerical ratingscale, low back pain disability was assessed by modified Oswestry low back pain disability questionnaire. The data collection period was only in 4 weeks.

Study was based on modified J.W.Kenney's open system theory model. It provides a comprehensive systemic frame work for evaluate the effectiveness of Guided imagery technique reducing in low back pain perception and low back pain disability among third trimester antenatal mothers. Descriptive and Inferential statistical test were used to report the findings

Objectives of the study were

1. To assess the level of low back pain perception and low back pain disability before after intervention among third trimester antenatal mothers.

2. To assess the effectiveness of guided imagery technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers.
3. To correlate the level of low back pain perception and selected low back pain disability among third trimester antenatal mothers.
4. To determine the association between pre test level of low back pain and selected demographic and clinical variables of third trimester antenatal mothers.

Main Findings Of The Study

It was inferred that, majority of the samples 63.33% belonged to 22-25 years of age category, 100% of samples were from rural area, 53.33% of them were graduates 50% of them homemakers 96.7%,of them were non vegetarians and 70%, of them belongs to Rs.5001-10000 income group.

In clinical variables majority of the subjects were had 29-32 weeks of gestational weeks and primi Gravida

Guided Imagery technique was effective in reducing severe low back pain perception. In pre test 16 mothers had severe low back pain perception. During post test 3 nobody had severe low back pain perception; out of 16 mothers 12 mothers had decreased to moderate level, and 4 mothers low back pain perception had decreased to mild level low back pain perception .The 14 mothers who had moderate level of low back pain perception during pre test belongs to mild low back pain perception during post test 3.

Guided Imagery technique was effective in reducing severe low back pain disability. In pre test 18 mothers had severe low back pain disability. During post test 3 nobody had severe low back pain disability, out of 18 mothers 12 mothers had decreased to moderate level, and 6 mothers had decreased to mild level low back pain disability . The 12 mothers who had moderate level of low back pain disability during pre test decreased from moderate to mild low back pain disability during post test 3. It was inferred that, the Guided imagery technique was highly effective in reducing the low back pain perception and low back pain disability among third trimester antenatal mothers.

There was a highly positive co relation (r = 0.72) between low back pain perception and low back pain disability among third trimester antenatal mothers.

There was association between low back pain perception and educational status.

There was no significant association between age, residential area, , occupation, dietary pattern , and income, there was no association between low back pain perception and clinical variables gestational age and number of gravida.

There was association between low back pain disability and educational status and there was no association between age in year, residential area, occupation, diet, and income, there was no significant association between low back pain disability and clinical variables gestational age and gravida.

Conclusion:

The main conclusion drawn from this present study was that most of the third trimester antenatal mothers had severe low back pain perception and severe low back

pain disability in pre test. After giving effective Guided Imagery Technique for 7 days , majority of the third trimester antenatal mothers had mild and moderate low back pain perception and mild and moderate low back pain disability . It is revealed that the proper Guided Imagery technique was effective in reducing the low back pain perception and low back pain disability.(personal care, walking, sitting, standing, sleeping, social life, employment, lifting).

Implications

According to Tolsma (1995) the section of the research report that focus on Nursing implication usually includes specific suggestions for Nursing Education, Nursing Administration and Nursing Research.

i) Nursing administration

- The nurse administrator should take initiative in organizing continuing nursing education programme on non-pharmacological measures for reducing low back pain disability and formulate policies, protocols in reducing low back pain disability among staff nurse.

- The study findings shows that Guided Imagery technique was effective in reducing low back pain perception and low back pain disability.All institutions and clinics can encourage the importance of using non- pharmacological intervention like Guided Imagery that reduces low back pain disability among antenatal mothers.

ii) Nursing education

- The practical knowledge of the Nurse depends upon the education they receive. So the Nursing Education should prepare the Nurses to realize their responsibility as 'Nurse Educator'
- Sufficient experience to improve practical skill must be included in Nursing Education programme.
- The curriculum should prepare the students to render their health services in various settings like community, hospitals, industry and other areas.

iii) Nursing research

- Most of the research efforts in the Guided Imagery technique have been from western countries and so there is a need to conduct further research studies in developing countries like India.
- The findings of the present study help to expand the study in different fields.

Recommendations

- The study can be replicated with large sample size
- The same study can be done with control group.
- The same study can be conducted as longitudinal study

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APPENDIX - A

Letter Seeking Expert's Opinion For Content Validity

From,

Mrs. S. Sugasini,

M.Sc (N) IInd Year,

Nehru Nursing College,

Vallioor.

To,

Through

The Principal,

Nehru Nursing College,

Vallioor.

Respected Madam / Sir,

Sub: Requesting opinion and suggestion for establishing content validity of Research Tool.

I would like to bring to your kind consideration that as a part of my M.SC (N) II year curriculum, I have selected the below mentioned topic for dissertation to be submitted to the Tamilnadu Dr. MGR Medical University, Chennai as a partial fulfillment of the degree of Master Science in Nursing. My Research topic is

" A study to assess the effectiveness of Guided Imagery Technique in reducing low back pain perception and low back pain disability among third trimester antenatal mothers. "

With regard I kindly request you to validate my tool for its appropriateness and relevancy. I am enclosing need for study statement of the problem, objectives, clinical variables, BPRS. I humbly request you to kindly validate the tool and give your valuable suggestions.

Thanking you

Place: **Yours Sincerely**

Date: S.Sugasini

APPENDIX – B

List of experts for content validity of research tool

1. **Prof. ANITA MARY LEENA, M.Sc (N),**

   Department of Obstetrics and Gynecological Nursing,
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2. **Mrs. RAJITHA, M.Sc (N) Ph.D,**

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3. **Mrs. ASTRA SOPHIA, M.Sc (N), Ph.D**

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APPENDIX – C

Guided Imaginary Training Certificate

PROF.M.P.VISWAM ,Bsc,Msw,Mphil(NIMHANS)

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Attukal Devi Institute of Medical Science, Manacaud, Trivandrum

40,PTP Nagar, White Gardens, Trivandrum-38, Ph:0471-2360903, Mob:9495360903

CERTIFICATE

This is to certify that Mrs. Sugasini IInd Year Msc (N) student of Nehru Nursing College, Valliyoor, Thirunelveli District TN, proposed to conduct "A STUDY TO ASESS THE EFFECTIVENESS OF GUIDED IMAGERY TECHNIQUE IN REDUCTION OF BACK PAIN AMONG THIRD TRIMESTER ANTINATEL MOTHER", in a primary health centre. For the purpose she has under gone 5 days (04/12/15 to 08/12/2015) training in guided imagery technique under my guidance. She has learned the basic things in guided imagery in the reduction of back pain. She is able to carry out the study and the technique proposed, and the questionnaire and the rating scale used for the study are found to be useful for the study.

SUGASINI.S
IInd Year Msc (N) OBC
Nehru Nursing College
Valliyoor
Thirunelveli (TN)

9-12-15

Prof: M.P VISWAM
Consultant Family Counsellor
9495360903

APPENDIX – D (a)

DEMOGRAPHIC VARIABLES

1. Maternal age

a) 18-21 years ☐
b) 22-25 years ☐
c) 26-29 years ☐
d) Above 30 years ☐

2. **Residential area**

a) Rural ☐
b) urban ☐

3. **Educational status**

a) No formal education ☐
b) Primary education ☐
c) Graduate ☐
d) Post graduate ☐

4. Occupation

a) Home maker ☐
b) Self employee ☐
c) Private job ☐
d) Government job ☐

5. Dietary pattern

a) Vegetarian ☐
b) Non vegetarian ☐

6. Income

a) < Rs.5000 ☐
b) Rs.5001-10,000 ☐
c) Rs.10001-15,000 ☐
d) >Rs.15000 ☐

CLINICAL VARIABLE

Purposes:

The proforma is used by the researcher to collect information on clinical variables such as gestational age , number of gravida.

1. **Gestational age**

   a) 25-28 weeks ☐

   b) 28-32 weeks

   c) 33-36 weeks

   d) 37-40 weeks

1) Number of gravid ☐

a) 1st

b) 2nd

c) 3rd

d) 4th

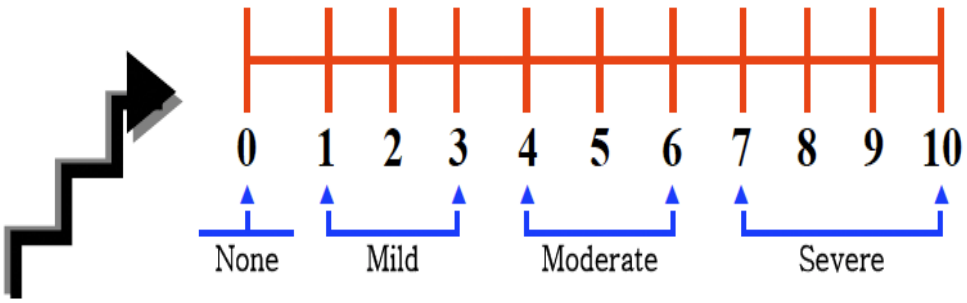
APPENDIX – D: b (1)
NUMERICAL PAIN RATING SCALE

Purpose

This scale is used to measure the intensity of low back pain perception among third trimester antenatal mothers.

Instruction

Please indicate the amount of pain felt by you. This response will be kept confidential.



Scoring key:

0 – No pain

1 -3 – Mild pain

4 – 6 – Moderate pain

7 – 10 – Severe pain

APPENDIX – D: b (2)

MODIFIED OSWESTRY LOW BACK PAIN DISABILITY QUESTIONNAIRE

1	Personal Care	No pain	0
		I can do even though it causes me pain	1
		I can do my self activities with some help	2
		I can't do my self activities	3
2	Walking	I have no pain on walking	0
		I have pain on walking , but I can walk my required to normal distances	1
		Pain prevents me from walking long distance	2
		Pain prevents me from walking at all	3
3	Sitting	Sitting does not cause me any pain	0
		Pain prevents me sitting more than one hour	1
		Pain prevents me from more than30 minutes	2
		Pain prevents me from sitting at all	
4	Standing	I can stand as long as I want without pain	0
		I have some pain while standing ,but it does not increase with time	1
		I cannot stand for longer than 1 hour without increasing pain	2
		I avoid standing because it increases the pain immediately	3
5	Sleeping	I have no pain while in sleeping	0
		I have pain in bed but it does not prevent me from sleeping well	1
		Because of pain I sleep only 1 hour of normal life	2
		Pain prevents me from sleeping at all	3
6	Social Life	My social life is normal and gives me no pain	0
		My social life is normal, but increases the degree of pain	1
		Pain prevents me from going out very often	2
		Pain has restricted my social life to my home	3
7	Employment	My normal job/home making duties do not cause pain	0
		My normal job/home making duties cause me extra pain ,but I can still perform all that is required of me	1
		Pain prevents me from doing anything buy light duties	2
		Pain prevents me from performing any job or home making	3
8	Lifting	I can lift w eight without extra low back pain	0
		I can lift weight but it causes mild pain	1
		Pain prevents me lifting weight which are positioned on the floor	2
		I can not lift weights at the most	3

Score interpretation

Total Score:

- 0 - No Pain
- 1-8 - Mild level low back Pain disability
- 9 – 16 - Moderate level low back pain disability
- 17-24 - Severe low back pain disability

Appendix – D : C
சுய விபரம்

1. **கர்ப்பிணியின் வயது**
   அ) 18- 21 ஆண்டுகள்
   ஆ) 22- 25 ஆண்டுகள்
   இ) 26-29 ஆண்டுகள்

2. **வாழும் இடம்**
   அ) கிராமம்
   ஆ) நகரம்

3. **கல்வி**
   அ) கல்வியறிவு இல்லை
   ஆ) தொடக்க கல்வி
   இ) இளங்கலை படிப்பு
   ஈ) முதுகலை படிப்பு

4. **வேலை**
   அ) வீட்டு வேலை
   ஆ) சுயதொழில்
   இ) தனியார் வேலை
   ஈ) அரசு வேலை

5. **உணவு முறை**
   அ) புலால் உண்பவர்
   ஆ) புலால் உண்ணாதவர்

6. **வருமானம்**
   அ) ரூ.5000/-த்திற்குள்
   ஆ) ரூ.5001 - 10,000/-
   இ) ரூ.10,001-15000/-
   ஈ) ரூ.15,000/-க்கும் மேல்

1) **கர்ப்ப வாரங்கள்**

அ) 25-28 வாரங்கள்

ஆ) 21-32 வாரங்கள்

இ) 33-36 வாரங்கள்

ஈ) 37-40 வாரங்கள்

2) **பிரசவம்**

அ) முதலாவது

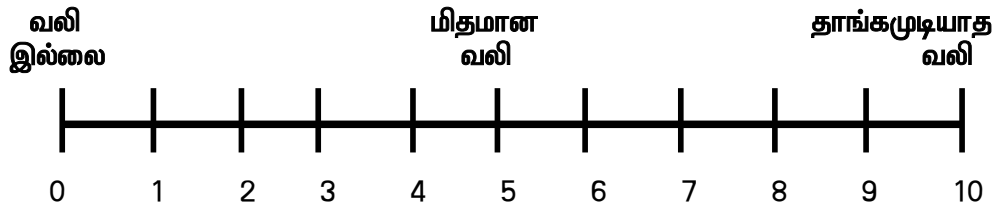
ஆ) இரண்டாவது

இ) மூன்றாவது

ஈ) நான்காவது

Appendix – D : d(1)

வலி அளவுகோல்



Appendix – D: d(2)

கர்ப்பிணி பெண்ணின் முதுகு வலியை அளவிடும் விளாத்தாள்

வ.எண்	வினாக்கள்		மதிப்பெண்
1.	சுயவேலை	வலி இல்லை	0
		வலி இருந்தாலும் சுய வேலைகளை செய்வேன்	1
		பிறர் உதவியோடு சுய வேலைகளை செய்வேன்	2
		என்னால் சுய வேலைகளை செய்ய முடியவில்லை	3
2.	நடத்தல்	நடக்கும்போது வலி இல்லை	0
		நடக்கும் போது வலி இருக்கிறது	1
		வலியிருந்தாலும் தேவையான அளவு நடப்பேன்	2
		வலியினால் என்னால் அதிக அளவு தூரம் நடக்க முடியவில்லை	3
3.	உட்காருதல்	உட்காருவதினால் வலி இல்லை	0
		வலியிருப்பதினால் 1 மணி நேரத்திற்கு அதிகமாக உட்கார இயலவில்லை	1
		வலியிருப்பதினால் 30 நிமிடங்களுக்கு மேல் உட்கார இயலவில்லை	2
		வலியினால் உட்கார இயலவில்லை	3
4.	எழுந்து நிற்தல்	என்னால் அதிகபடியான நேரம் விருப்பபடி நிற்க முடியும்	0
		நிற்கும் போது வலியிருக்கும் ஆனால் நேரம் அதிகமாகும் போது வலி அதிகப்படாது	1
		அதிகப்படியான வலியினால் ஒரு மணி நேரத்திற்கு மேல் நிற்க இயலவில்லை	2
		எழுந்து நிற்பதை தவிர்க்கிறேன் ஏனென்றால் வலி அதிகப்படுகிறது.	3
5	உறங்குதல்	உறங்கும்பொழுது வலி இல்லை	0
		வலி இருந்த பொழுதிலும் உறங்குவதில் எந்த பிரச்சனையில்லை	1
		வலியினால் ஒரு மணிநேரத்திற்கு மேல் உறங்க இயலவில்லை	2
		வலியினால் உறங்க இயலவில்லை	3
6.	வெளிப்புற வேலை	வெளிப்புற வேலைகள் அளவாக உள்ளது வலி ஏதும் இல்லை	0
		வெளிப்புற வேலைகள் அளவாக உள்ளது. ஆனால் சிறிதளவு வலி ஏற்படுகிறது.	1
		வலியினால் என்னால் அடிக்கடி வெளியில் செல்ல இயலவில்லை	2
		வலியினால் வீட்டை விட்டு வெளியே செல்ல இயலவில்லை	7

7.	வேலை	வேலையில் ஈடுபடுவதினால் வலி ஏற்படுவதில்லை	0
		வேலையினால் வலி ஏற்பட்ட போதிலும் என்னுடைய தேவைக்காக வேலையில் ஈடுபடுகிறேன்.	1
		வலியினால் வேலை செய்ய இயலவில்லை ஆனால் சிறு சிறு வேலைகளை செய்கிறேன்	2
		வலியினால் அறவே வேலை செய்ய இயலவில்லை	3
8.	பொருட்கள் தூக்குதல்	வலி ஏற்படாமலே என்னால் அதிகப்படியான எடையுள்ள பொருட்கள் தூக்க இயலும்	0
		அதிகபடியான எடையுள்ள பொருட்களை தூக்கும் போது வலி ஏற்படுகிறது.	1
		வலியினால் அதிக எடையுள்ள பொருட்களை தூக்க இயலவில்லை ஆனால் ஏதுவான இடத்தில் இருக்கும் பொருட்களை தூக்க இயலும்.	2
		என்னால் குறைந்த எடையுள்ள பொருட்களை மட்டுமே தூக்க இயலும்	3

மதிப்பெண்			**மொத்த மதிப்பெண்கள்**		
0	-	வலியில்லை	0	-	வலியில்லை
1	-	மிகக்குறைவான வலி	1-8	-	மிகக்குறைவான வலி
2	-	மிதமான வலி	9-16	-	மிதமான வலி
3	-	அதிகமான வலி	17-24	-	அதிகமான வலி